

Amendments to the Claims:

Please cancel claims 6-9 and 17 without prejudice.

*All  
cancel*

1. (Original) A method for detecting interlace motion artifacts comprising:
  - a) detecting a presence of multiple vertical frequencies in an image;
  - b) analyzing relative levels of the presence of multiple vertical frequencies; and
  - c) deriving an indication of a presence of motion artifacts.
2. (Original) The method of claim 1 further comprising:
  - a) determining an overall measure of image intensity and dynamic range; and
  - b) compensating the indication of the presence of motion artifacts in areas of low luminosity or contrast.
3. (Original) A method for the detection of interlaced motion artifacts comprising:
  - a) obtaining eight vertically aligned luma data samples;
  - b) calculating a partial discrete fourier transform for a  $f_{max}$  value;
  - c) calculating a partial discrete fourier transform for a  $f_{max}/2$  value; and
  - d) calculating a partial discrete fourier transform for a  $f_{max}$  value.
4. (Original) The method of claim 3 further comprising:
  - a) obtaining four vertically aligned luma data samples;
  - b) calculating a second  $f_{max}$  value; and
  - c) passing the  $f_{max}$  value, the  $f_{max}/2$  value, the  $f_{max}/4$  value and the second  $f_{max}$  value though a filter resulting in a filtered  $f_{max}$  value, a filtered  $f_{max}/2$  value, a filtered  $f_{max}/4$  value and a filtered second  $f_{max}$  value.

5. (Original) The method of claim 4 wherein the filtered values are obtained by:

- a) obtaining a first and second previous  $f_{max}$  values, a current  $f_{max}$  value and a next and second next  $f_{max}$  values;
- b) doubling the first previous, current and next  $f_{max}$  values;
- c) summing the doubled first previous, current and next  $f_{max}$  values with the second previous and second next  $f_{max}$  value; and
- d) dividing the sum by 8.

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Claims 6-9 (Canceled)

10. (Original) A method for the prevention of false detection of interlace motion artifacts comprising:

- a) obtaining a plurality of  $f_{max}$  frequency detection values;
- b) comparing the plurality of  $f_{max}$  frequency detection values to a threshold; and
- c) adjusting the plurality of  $f_{max}$  frequency detection values based upon the comparison.

11. (Original) The method of claim 10 wherein the plurality of  $f_{max}$  frequency detection values comprises a composite  $f_{max}$  frequency detection value, a level-boosted  $f_{max}/2$  frequency detection value and a level-boosted  $f_{max}/4$  frequency detection value.

12. (Original) The method of claim 11 wherein the composite  $f_{max}$  frequency detection value is adjusted by:

- a) comparing the composite  $f_{max}$  frequency detection value to a first low frequency threshold;
- b) multiplying a first low frequency scale factor by the level-boosted  $f_{max}/2$  frequency detection value and subtracting from the composite  $f_{max}$  frequency detection value if the composite  $f_{max}$  frequency detection value is less than the first low frequency, threshold; and

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- c) multiplying a second low frequency scale factor by the level-boosted  $f_{max}$  frequency detection value and subtracting from the composite  $f_{max}$  frequency detection value if the composite  $f_{max}$  frequency detection value is greater than the first low frequency threshold.

13. (Original) The method of claim 12 wherein the composite  $f_{max}$  frequency detection value is adjusted by:

- a) comparing the level-boosted  $f_{max}/4$  frequency detection value to a second low frequency threshold;
- b) multiplying a third low frequency scale factor by the level-boosted  $f_{max}/4$  frequency detection value and subtracting from the composite  $f_{max}$  frequency detection value if the level-boosted  $f_{max}/4$  frequency detection value is less than the second low frequency threshold; and
- c) multiplying a fourth low frequency scale factor by the level-boosted  $f_{max}$  frequency detection value and subtracting from the composite  $f_{max}$  frequency detection value if the level-boosted  $f_{max}/4$  frequency detection value is greater than the second low frequency threshold.

14. (Original) The method of claim 13 further comprising setting the composite  $f_{max}$  frequency detection value to zero if the composite  $f_{max}$  frequency detection value is less than zero.

15. (Original) The method of claim 13 wherein the composite  $f_{max}$  frequency detection value is lowpass filtered.

16. (Original) The method of claim 15 wherein the lowpass filtering comprises:

- a) obtaining a first and second previous  $f_{max}$  values, the composite  $f_{max}$  frequency detection value and a next and second next  $f_{max}$  values;
- b) doubling the first previous, and next  $f_{max}$  values;
- c) octupling the composite  $f_{max}$  frequency detection value;
- d) summing the doubled first previous  $f_{max}$  value, the doubled next  $f_{max}$  value, the octupled  $f_{max}$  frequency detection value with the second previous and second next  $f_{max}$  value; and
- e) dividing the sum by 8.

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cancel* 17. (Canceled)

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